

REMARKS

Reconsideration of this application and withdrawal of the rejections set forth in the Office Action mailed February 12, 2007, is requested in view of the amendments above and the following remarks. Claims 1-12 were pending and at issue in this application prior to this amendment. By this amendment, Claim 1 has been amended. No new matter has been added.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 102 OVER SCHAEFER ET AL.

Claims 1-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by Schaefer et al. (U.S. Patent No. 7,029,486). In order to anticipate a claim under § 102(b), a single prior art reference must disclose, either expressly or inherently, each and every limitation of the claimed invention. Applicant respectfully submits that this rejection should be withdrawn because Schaefer et al. does not disclose, either expressly or inherently, Applicant's claimed invention as amended herein. Applicant has amended claim 1 to require that the vaso-occlusive device having loops in which successive loops lie in different planes which form an angle between them, but also have at least two loops which lie in different but parallel planes (i.e. planes which do not form an angle between them). Neither Schaefer et al., nor the other cited prior art, teaches or discloses such a vaso-occlusive device.

Claim 1, as amended herein, is directed to a vaso-occlusive device having a series of at least four successive loops, each loop of the series having a different axis than, and lying in a separate plane from, any of the other loop of the series. At the same time, at least two of the loops lie in planes which are substantially parallel. Finally, the successive planes must form an angle greater than 30 degrees. The vaso-occlusive coil of Fig. 4 of the present application is but one example of such a device. By requiring at least some of the coils to lie in substantially parallel planes, the

resulting coil can have a somewhat uniform shape which can be created on a mandrel having a repeating geometry such that the winding the coil on the mandrel can be automated.

In contrast to Applicant's claimed invention, Schaefer et al. does not disclose a vaso-occlusive device having the required geometry of claim 1. For example, the coil shown in Figs. 1-4 of Schaefer et al. do not have 4 successive loops in which successive loops lie in planes forming an angle of greater than 30 degrees. In the device of Fig. 1, many of the loops lie in the same plane, or substantially parallel planes. In the device of Figs. 2, successive loops are substantially parallel. In the devices of Figs. 3 and 4, there are not FOUR successive loops lying in planes forming an angle of greater than 30 degrees, because at least the two right most loops of the coil lie in substantially parallel planes.

The Examiner also pointed to Figs. 8-17 as anticipating Applicant's claimed invention. To the contrary, none of these Figures show a coil having at least four successive loops lying in planes in which successive planes form an angle greater than 30 degrees, while also having loops which lie in planes which are substantially parallel. The coil of Figures 8 and 9 do not have loops lying in substantially parallel planes. The coils of Figs. 10-16 do not have at least four successive loops lying in planes in which successive planes form an angle greater than 30 degrees. Indeed, the coils of Figs. 10-16 have loops in which all of the coils lie in planes which are either co-planar or substantially parallel. The coil of Fig. 17, like the coil of Figs. 8 and 9, does not have loops lying in substantially parallel planes.

Accordingly, claim 1 is not anticipated by Schaefer et al. and this rejection should be withdrawn. Claims 2-12 depend from claim 1, and are therefore not anticipated by Schaefer et al. for at least the same reasons applicable to claim 1.

Claim 2

Claim 2 depends from claim 1 and further recites that each plane forming an angle between successive loops is between 45 and 90 degrees. Schaefer et al. is similarly silent as to a coil having loops lying in planes at angles between 45 and 90 degrees. Figs. 3-4 and 8-9, and the accompanying text, of Schaefer, discloses that the angle of the planes between successive loops is about 30 degrees, and not more than 90 degrees and preferably not more than 45 degrees. Thus, Schaefer at most discloses the ranges of less than 90 degrees, or less than 45 degrees, but not the claimed range between 45 and 90 degrees. Therefore, claim 2 is not anticipated by Schaefer et al.

Claim 3

Claim 3 depends from claim 1 and further recites that successive planes of the series of at least 4 loops are perpendicular. Schaefer et al. does not disclose any coils in which successive loops are perpendicular. Indeed, Schaefer et al. specifically excludes such a configuration because it explicitly states that the angle is not more than about 90 degrees. Thus, claim 3 is not anticipated by Schaefer et al.

Claims 8 and 9

Schaefer et al. also does not disclose the inventions of claims 8 and 9, which require that at least one loop comprise a particular shape, namely an elliptical form or an oval form, respectively. The Examiner points to no teaching in Schaefer et al. of such shapes for the loop of a coil. Thus, Claims 8 and 9 are not anticipated by Schaefer et al.

CONCLUSION

Any claim amendments which are not specifically discussed in the above remarks are not made for reasons of patentability, do not affect the scope of the claims, and it is respectfully submitted that the claims satisfy the statutory requirements for patentability without the entry of such

amendments. These amendments have only been made to increase claim readability, to improve grammar, or to reduce the time and effort required of those in the art to clearly understand the scope of the claim language.

In view of the foregoing amendments and remarks, Applicant respectfully submits that all of the Examiner's rejections have been overcome. Accordingly, allowance is earnestly solicited. If the Examiner feels that a telephone interview could expedite resolution of any remaining issues, the examiner is encouraged to contact Applicant's undersigned representative at the phone number listed below.

Respectfully submitted,
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Dated: May 25, 2007

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